FIG. 1

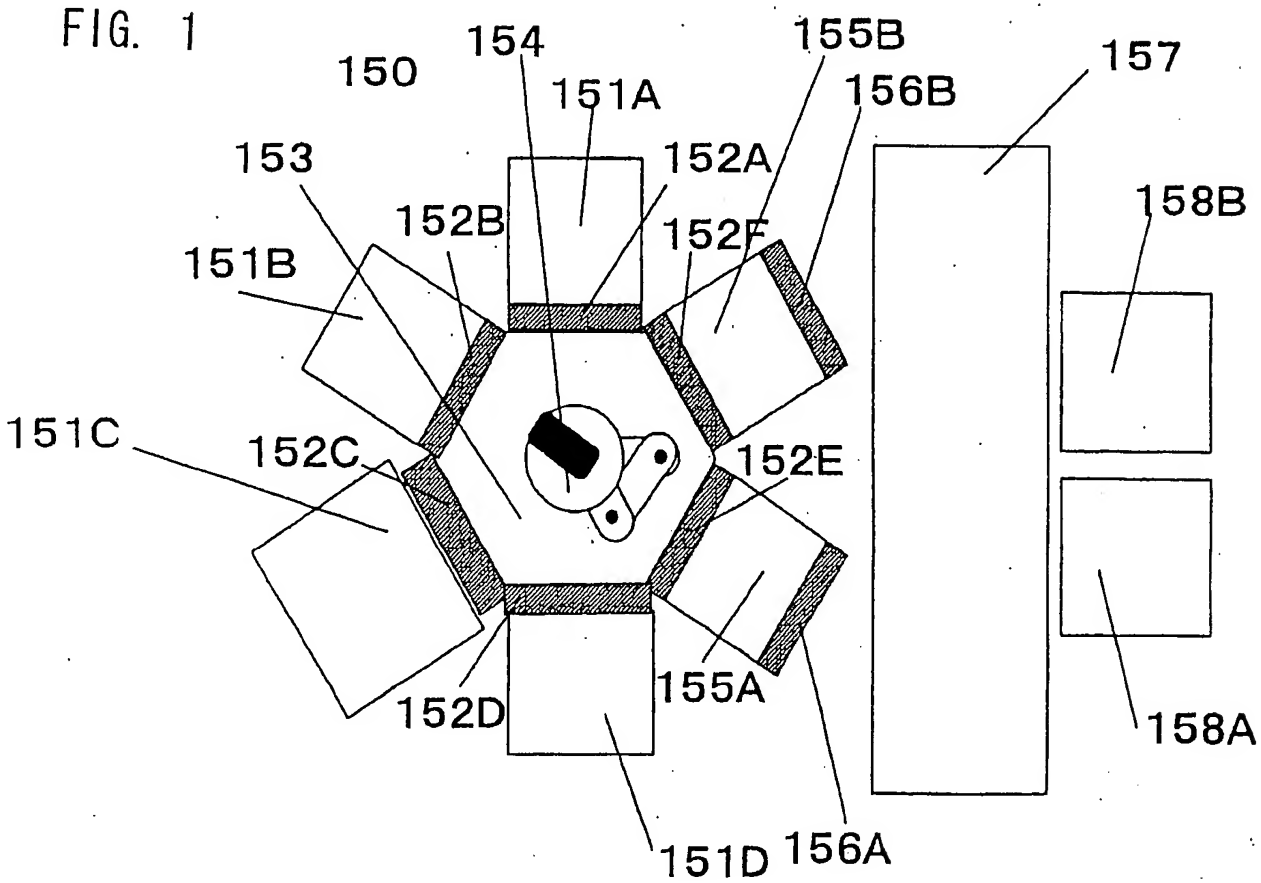

150
154
155B
157
151A
156B
153
152A
158B
152B
152F
151B
151C
152C
152E
152D
155A
158A
151D
156A

FIG 2

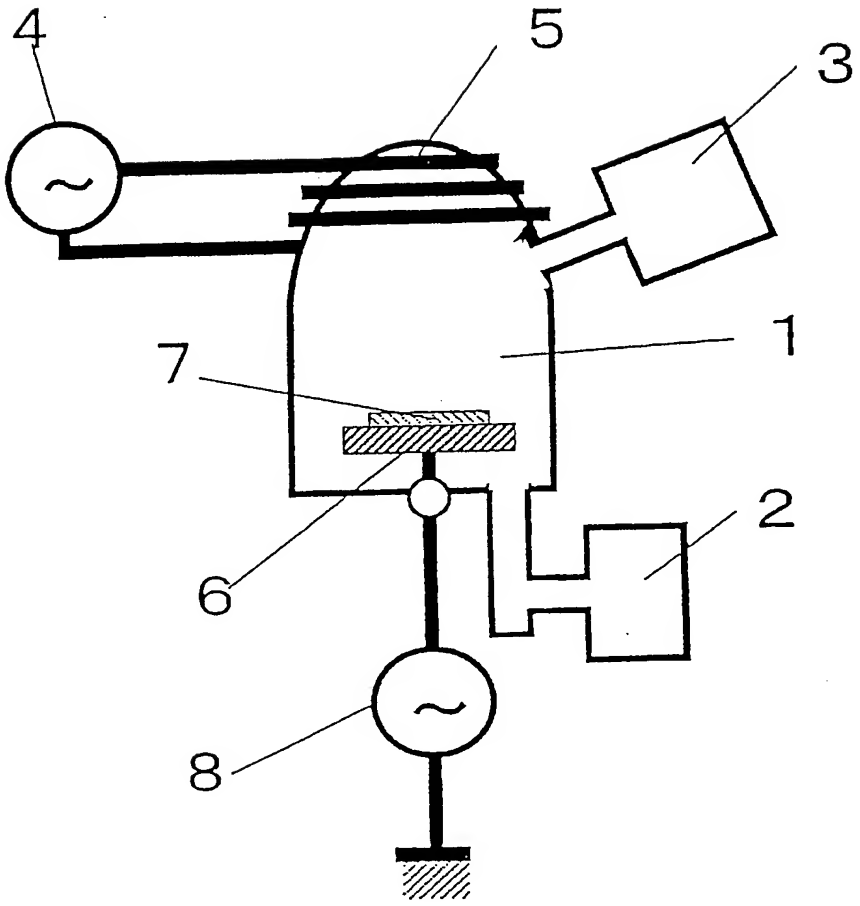


FIG. 3

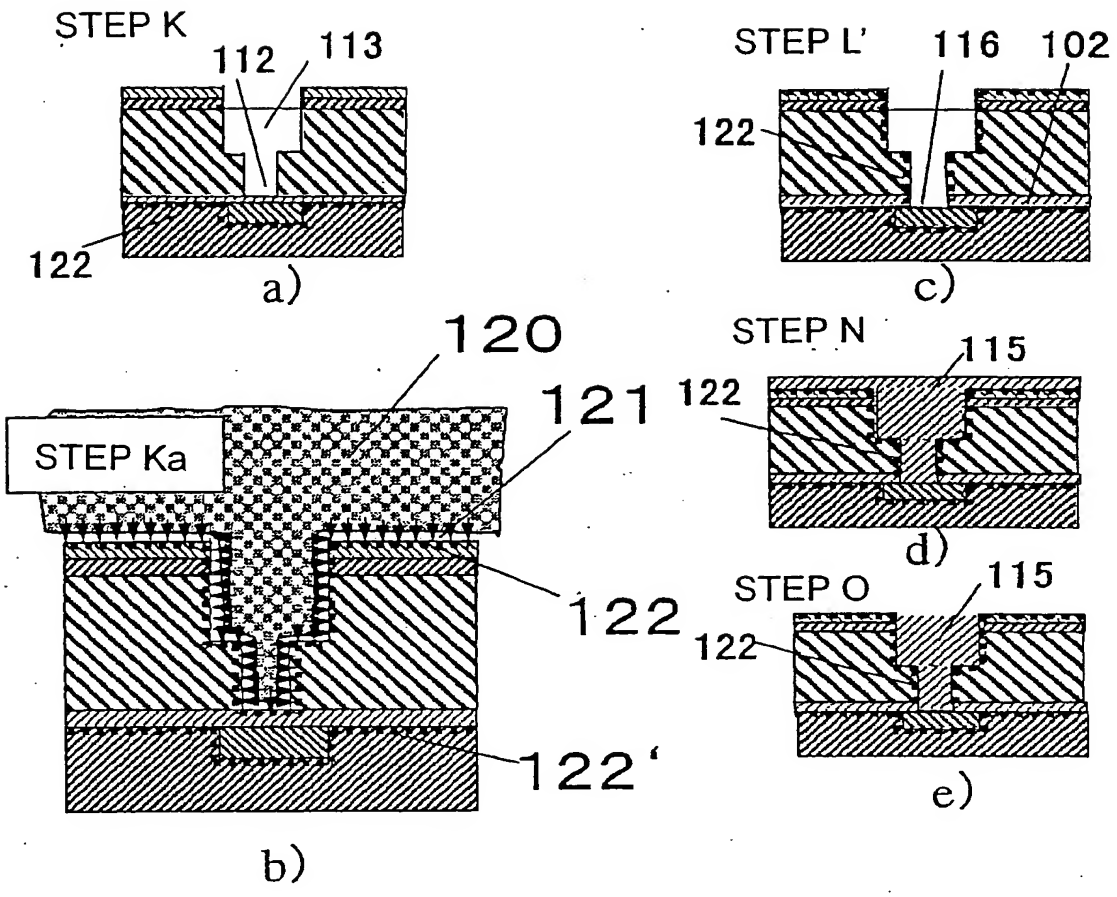

STEP K
112
113
122
a)
120
121
STEP Ka
122
122'
b)
STEP L'
116
102
122
c)
STEP N
115
122
d)
STEP O
115
122
e)

FIG. 4

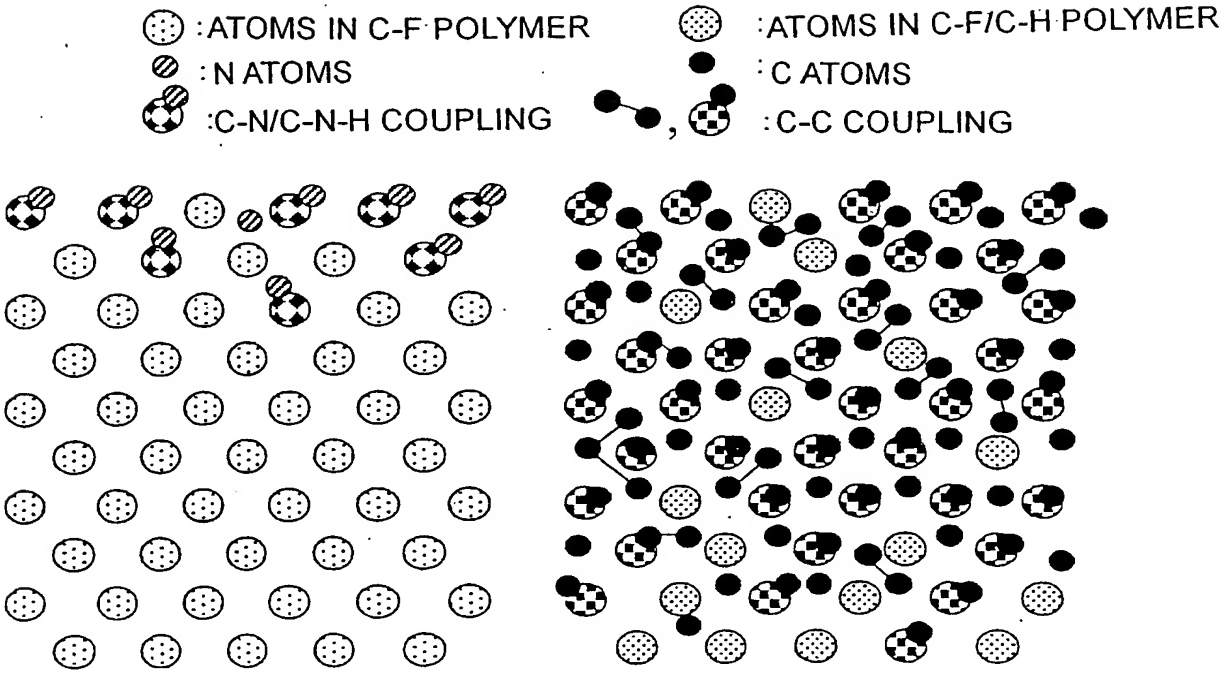

:ATOMS IN C-F POLYMER
:N ATOMS
:C-N/C-N-H COUPLING
:ATOMS IN C-F/C-H POLYMER
:C ATOMS
:C-C COUPLING
a)
b)

FIG. 5

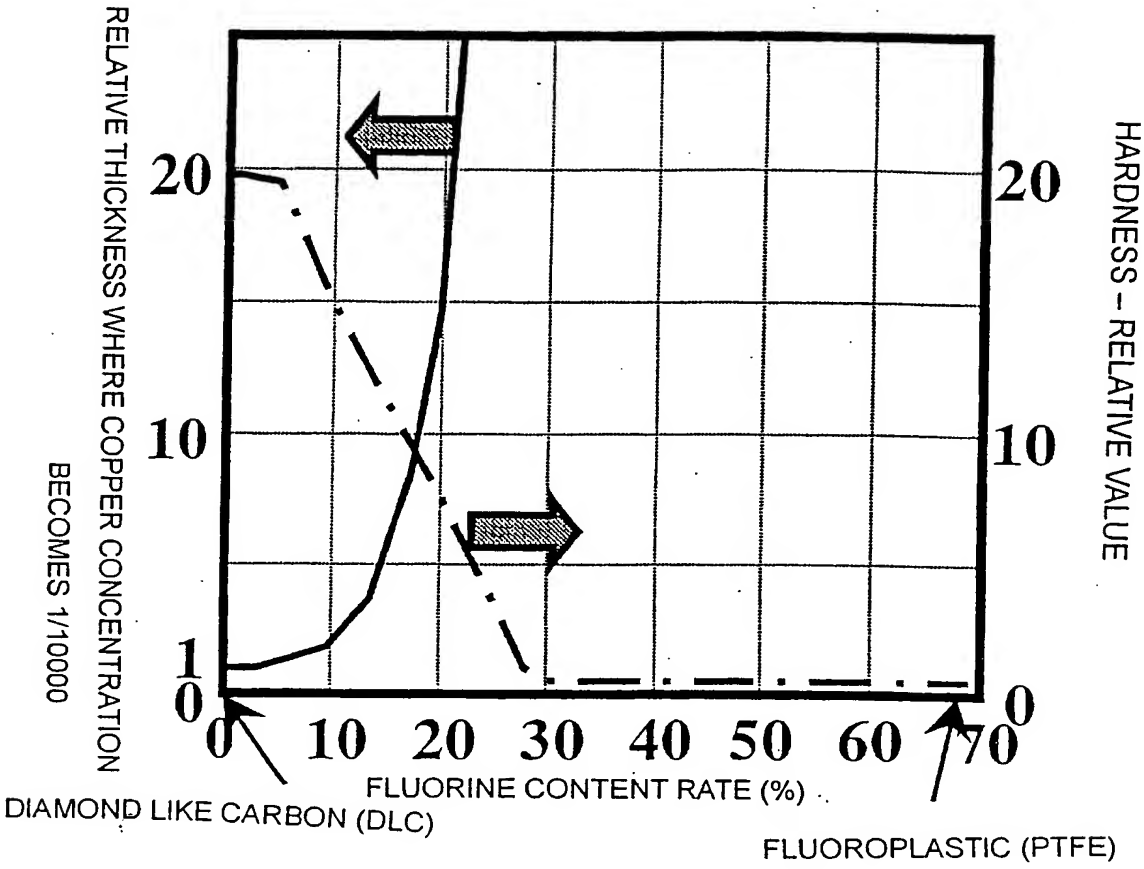

RELATIVE THICKNESS WHERE COPPER CONCENTRATION BECOMES 1/10000
HARDNESS – RELATIVE VALUE
20
10
1
0
20
10
0
0 10 20 30 40 50 60 70
FLUORINE CONTENT RATE (%)
DIAMOND LIKE CARBON (DLC)
FLUOROPLASTIC (PTFE)

FIG. 6

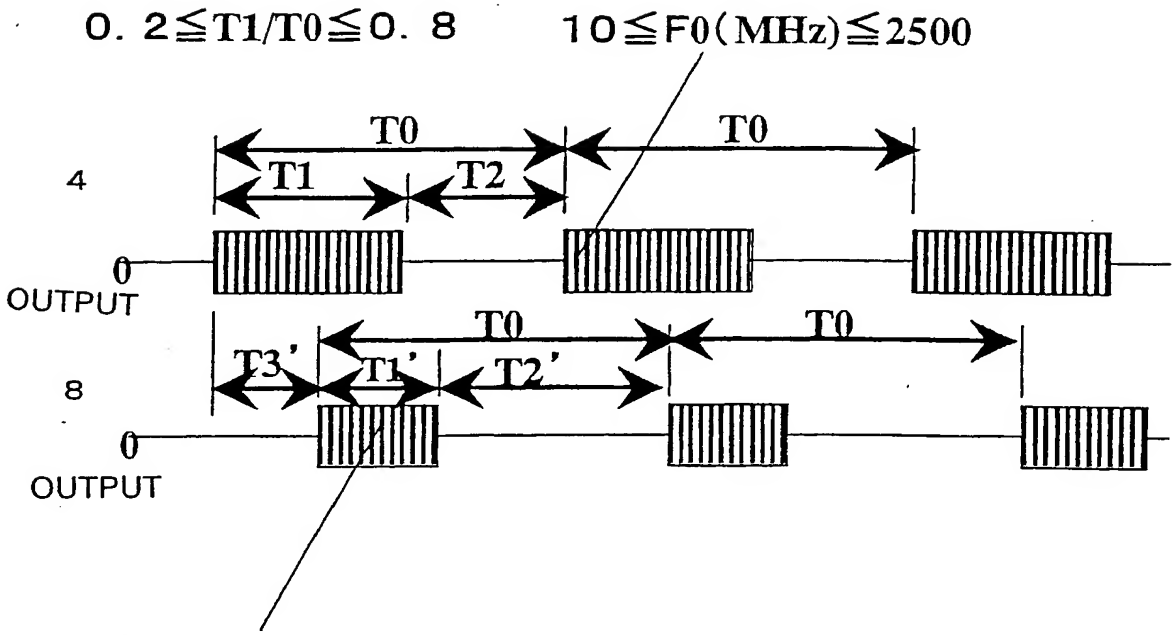
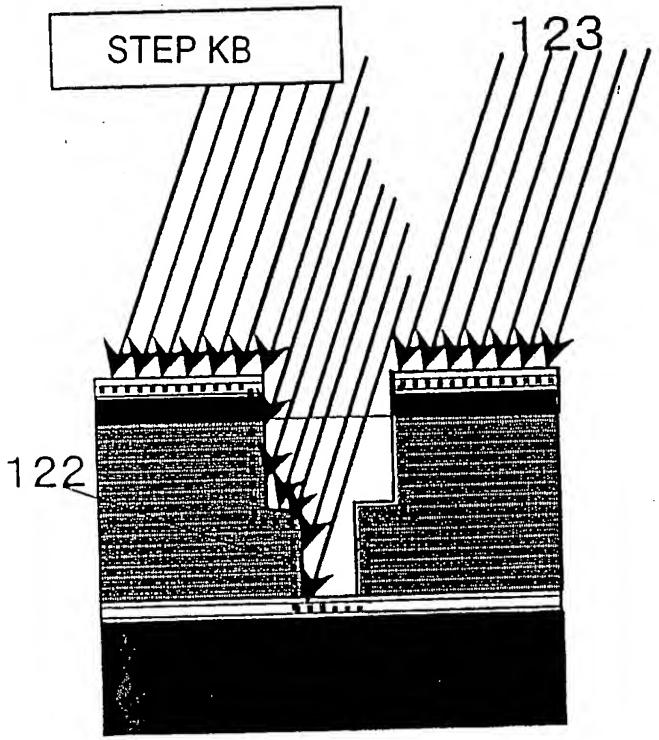
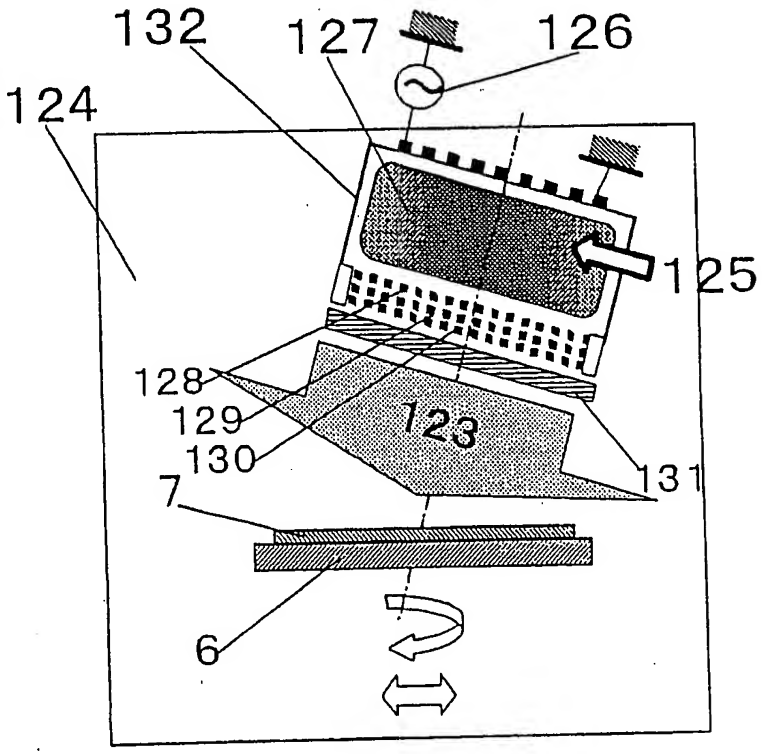

0.2≦T1/T0≦0.8
10≦F0(MHz)≦2500
T0
T0
T1
T2
4
0
OUTPUT
T0
T0
T3'
T1'
T2'
8
0
OUTPUT
0.1≦F1(MHz)≦20
0≦T3'/T1≦1
0.2≦T1'/T0≦0.8

FIG. 7



a)



b)

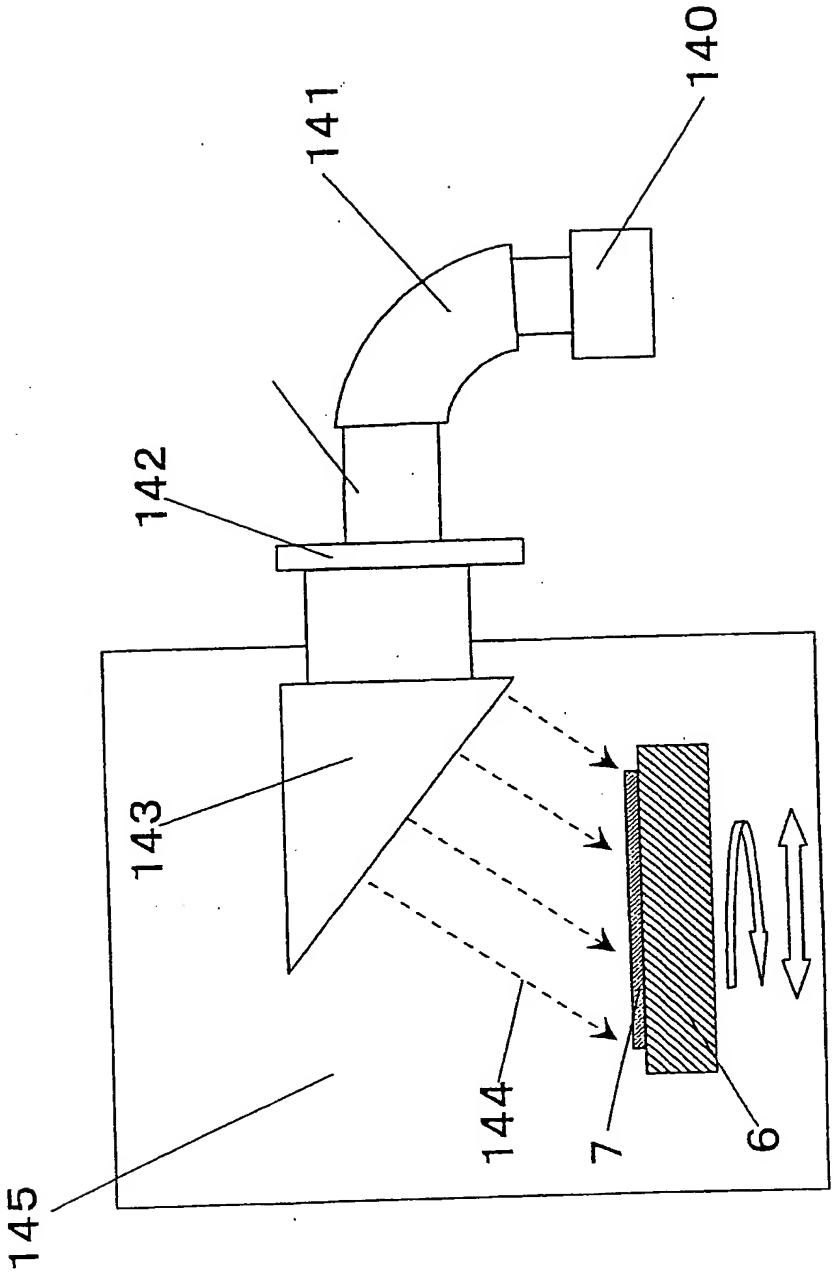


FIG. 8

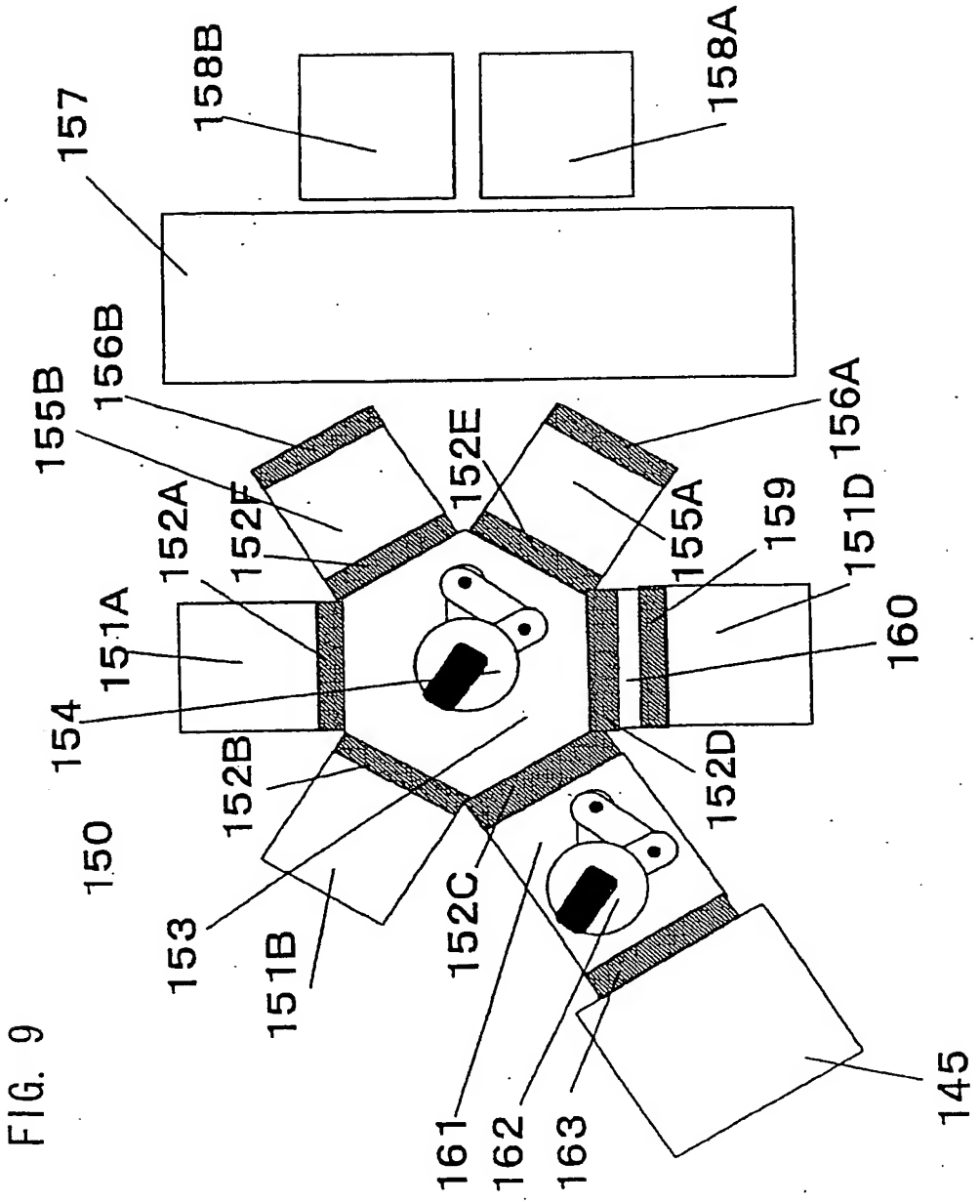

158B
158A
157
156B
155B
156A
152E
152A
152F
155A
159
151D
151A
160
154
152B
152D
150
153
152C
151B
161
162
163
145

FIG. 9

FIG. 10

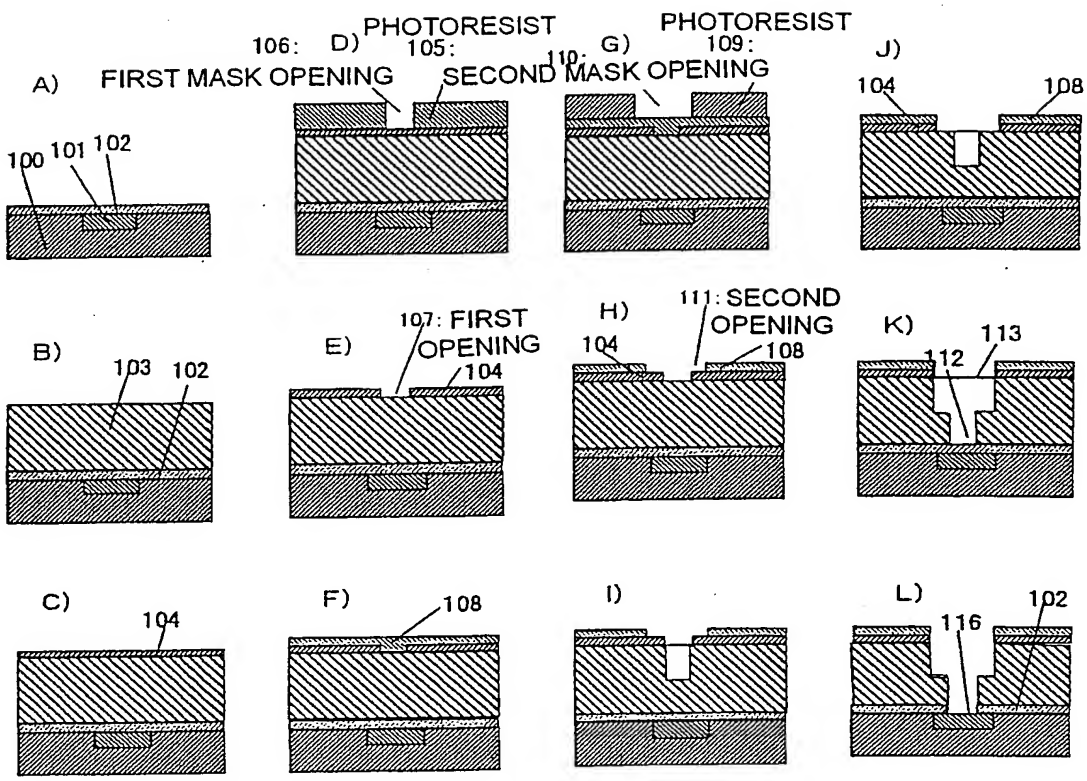

A)
FIRST MASK OPENING
100
101
102
D)
106:
PHOTORESIST
105:
SECOND MASK OPENING
G)
110:
PHOTORESIST
109:
J)
104
108
B)
103
102
E)
107: FIRST OPENING
104
H)
104
111: SECOND OPENING
108
K)
112
113
C)
104
F)
108
I)
L)
116
102

FIG. 11

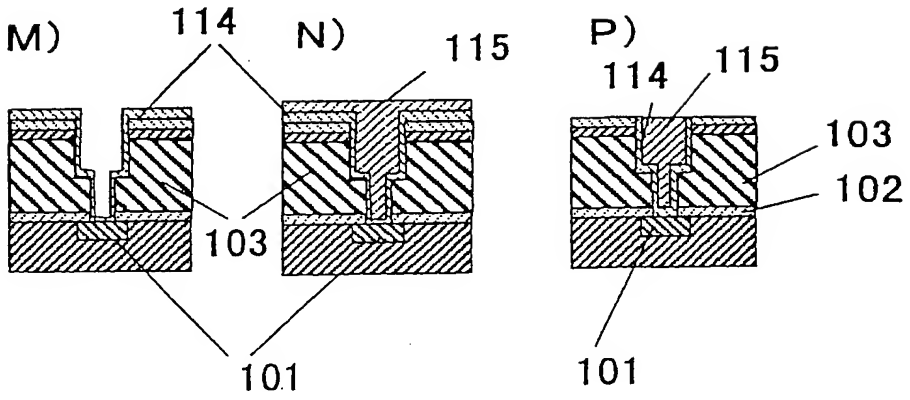
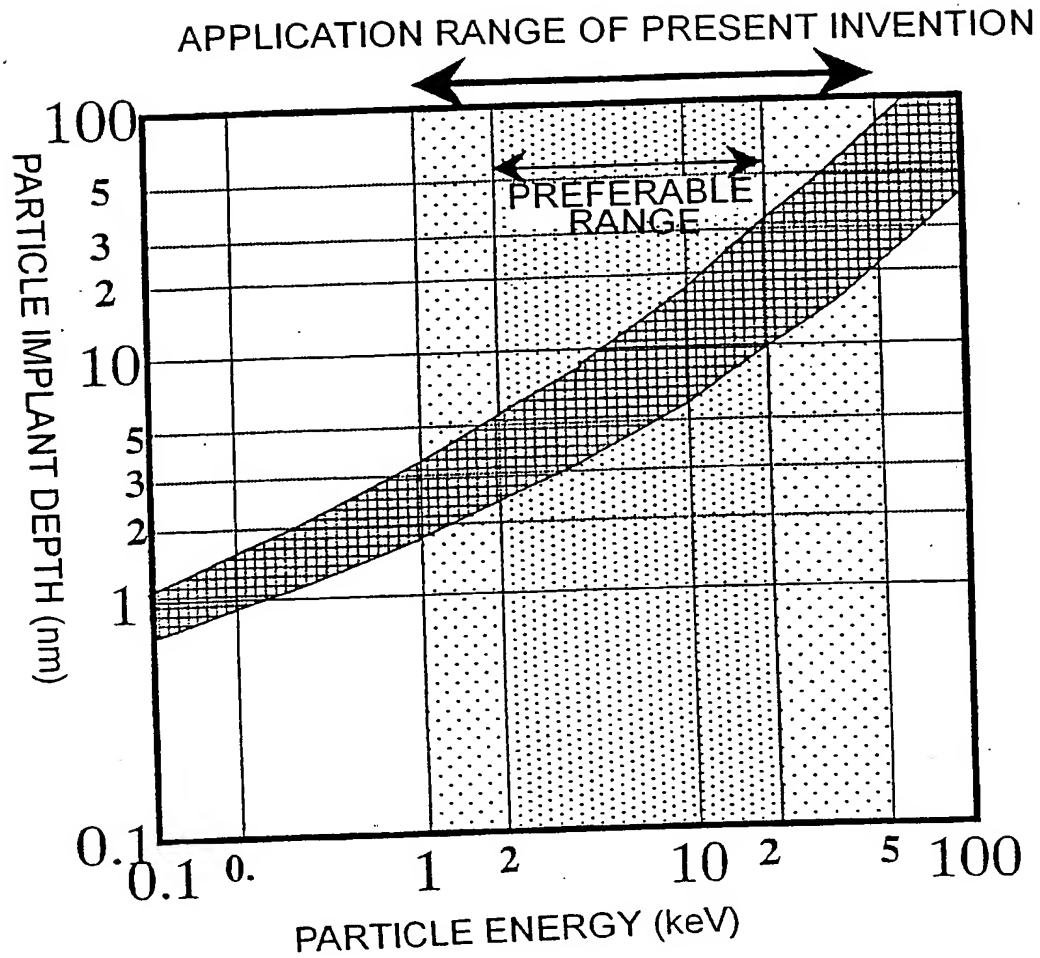

M)
114
N)
115
103
101
P)
114
115
103
102
101

FIG. 12


APPLICATION RANGE OF PRESENT INVENTION
PREFERABLE RANGE
PARTICLE IMPLANT DEPTH (nm)
100
5
3
2
10
5
3
2
1
0.1
0.1
0.
1
2
10
2
5
100
PARTICLE ENERGY (keV)